UNITED STATES DISTRICT COURT

FOR THE SOUTHERN DISTRICT OF CALIFORNIA

RYAN MOORE, Plaintiff, v. UNITED STATES OF AMERICA and DOES I THROUGH 25, INCLUSIVE, Defendants.	)	No. 15-CV-0075-LAB March 1, 2017 1:21 p.m. San Diego, California

EXCERPTED TRANSCRIPT OF BENCH TRIAL - DAY TWO
BEFORE THE HONORABLE LARRY ALAN BURNS
UNITED STATES DISTRICT JUDGE
(Testimony of Dr. Markel)

APPEARANCES:

For the Plaintiff: GOMEZ TRIAL ATTORNEYS
ROBERT J. CHAMBERS
BEN WOHLFEIL
655 West Broadway, Suite 1700
San Diego, CA 92101

For the Defendant: TIM L. LASKE
GARRETT J. COYLE
ASSISTANT UNITED STATES ATTORNEYS
Federal Building, Suite 7516
300 North Los Angeles Street
Los Angeles, CA 90012

Court Reporter: Melinda S. Setterman, RPR, CRR
District Court Clerk's Office
333 West Broadway, Suite 420
San Diego, California, 92101
melinda_setterman@casd.uscourts.gov

Reported by Stenotype, Transcribed by Computer

INDEX

TESTIMONY:

EXHIBITS:

(None marked and/or admitted)

* * * *

SAN DIEGO, CALIFORNIA, MARCH 1, 2017, 1:21 P.M.

* * * *

(Proceedings resume following the lunch recess.)

THE COURT: All right. Counsel and the parties are here.

01:21

The plaintiff may call its next witness.

MR CHAMBERS: Your Honor, we would like to call Nancy Markel.

THE CLERK: Can you please raise your right hand.

01:22

(Oath administered.)

THE WITNESS: I do.

THE CLERK: Thank you. Please take a seat, and please speak into the microphone at all times. Can you please state and spell your first and last name for the record.

01:22

THE WITNESS: Nancy, N-A-N-C-Y, Markel, M-A-R-K-E-L.

NANCY MARKEL,

DIRECT EXAMINATION

BY MR CHAMBERS:

Q. Good afternoon, Dr. Markel.

01:22

A. Good afternoon.

Q. You are a neuropsychologist.

A. I am.

Q. Can you tell us how that differs from an ordinary psychologist?

01:22

A. Well, we get the same training as a regular psychologist,

but we then go onto advance training in brain functioning and the relationship between the brain and behavior, and we do more exhaustive training in that testing and interpreting the testing data and in understanding what behavior may be driven by brain functioning.

Q. What sort of specific experience do you have treating brain injury patients?

A. I did all my post-doctoral hours in neuropsychology, and I worked in that field for many years, and then for 11 years specifically I worked at Sharp Rehabilitation Center, which is an acute inpatient rehab center as well as an outpatient center for people who have undergone traumatic brain injuries, including brain injuries.

Q. In this case you were tasked with performing a neuropsychological evaluation of Mr. Moore.

A. That's correct.

Q. And you spent a couple days doing that?

A. Two days.

Q. Do you recall when that was?

A. I believe it December of 2015, December 1st, December 3rd.

Q. What is a neuropsychological evaluation?

A. Well, depending on the case and the patient and the presenting problems, it usually consists of doing a very careful history taking and record review of -- specific in this instance, hospital records and other records that were --

MR CHAMBERS: We lost the mic.

THE COURT: I may have done it. I think I touched it. I was trying to clean the screen off.

I'm sorry, doctor. Try it now.

01:24 THE WITNESS: Can you hear me? I can speak loud. I've emptied a room before. I have never quieted it.

THE COURT: Again, I apologize. I was trying to clean the dirty screen off and I must have pushed the button.

Go ahead.

01:24 THE WITNESS: Where was I?

BY MR CHAMBERS:

Q. You were in the midst of explaining what a neuropsychological evaluation entails?

A. Consists of history taking, record reviews, the performance and administration of various tests, the scoring of those tests, the interpretation of those tests. That is just the barebones of a neuropsychological evaluation.

Q. We'll dig into it here in a minute, but during your history taking and the administration of your tests over the course of those two days, did you have validity measures and truthfulness measures and all that built into your testing?

A. Yes, imbedded into any comprehensive neuropsychological evaluation are measures of a person's ability to give good effort during testing because the one thing you want know when you are interpreting the test scores is this a person's valid

responses to these tasks, or are they trying to exaggerate or feign problems that they may not have.

So there is some measures that we call stand-alone measures, that is, that is all their intention is to do looking at effort, and there are what we call embedded measures, that are measures that are embedded within other forms of a test and parse out whether a person is giving good effort.

Those were administered intermittently over the course of the two days. Mr. Moore passed every single one of them.

01:25 Q. Did you find him to be truthful both on your history and testing?

A. He was very forthcoming. He was very truthful both in the history taking and the test taking and in discussing his past. I mean, he was volunteering information that I hadn't even know to ask. For instance, during the history taking, he informed me of an accident that had occurred several years before, the one that brought him to my office in which he had been -- had to go to trial on that and explained what happened there, so I found him to be a very forthcoming and upstanding in terms of giving me valid information.

Q. All right. Well, let's turn to your testing then. There are binders behind you. If you would prefer a paper copy of your report, I am happy to bring it up on the screen.

Why don't we get it up 135 on the screen, please.

A. Which binder would I go to?

Q. It should have numbers. 135 is the exhibit number.
A. It was right there. Sorry.
Q. We can scroll up and down depending on what page you are looking at.
01:27 A. Can I turn the sound off then? Sorry.
Q. Why don't you tell us what you did.
A. Well, what I've done here is I just started out in my report talking about what brought him to be referred to me and then did a history based on what he was able to tell me, and
01:27 then I think from there I went into not just the background of what he could tell me about the accident which led to this evaluation but also about his background information, that is, his family background, history taking, and that sense.

And from there I then wanted to go and become more current,
01:27 okay, since can the accident what has happened, so he gave me the information regarding his current status, and included in that was a form I had him complete which is called the signs and symptoms form, which allows him to go through various aspects of functioning, cognitive functioning, emotional
01:28 functioning, behavioral functioning, pain functioning. That talks about what he perceived his abilities were before and what they are like after, so you can do a comparison.

That has no validity measures on it. It is just his own self-report and his own perception of his ability or lack of
01:28 ability, and it was fairly consistent with everything else I

had seen in the records.
Q. All right. Well, why don't we move to your findings, and then you can kind of supplement and explain how you got there. What were your findings with respect to your neuropsychological
01:28 evaluation of Ryan Moore?
A. Well, this was interesting because two days of testing -- there were a lot of tests that were administered. You get a lot of scores. And at the end of the day when I went through everything and I looked at all the scores, there were just some
01:28 very what we call in my world lovely scores. They were average, above average. Anybody would be happy to have those scores.
But among the scores, there were a couple standouts that I found, okay, now this is unusual because it wasn't what I had
01:29 initially expected. One of the things that Mr. Moore had talked about in terms of some of his own complaints about what he felt his changes were included problems with memory, problems being slower in processing, some problems with word recall.
01:29 And when I looked at, for instance, some of the memory scores, they were remarkably strong. Now, the one thing I had to bear in mind was that Mr. Moore had just been tested one month prior to my evaluation. Many of the tests that I gave were the same tests that he had been given before.
01:29 One month is a very short time between testing and

retesting, so we have what we call practice effects, and there are certain areas that we expect will do better because a person has just done the same task a very few weeks ago.

Q. The person that performed the test a month before you, that was the defense expert?

A. That's correct, Dr. Evans. Where I could, I tried to use an alternate form, but many of our tests don't provide for that so you are stuck with what you have.

Be that said, there were certain consistencies both in my testing and Dr. Evans' testing that stood out, so one of the areas that showed up to have a strong component of a part of the brain functioning that we know is vulnerable to a brain injury is called processing speed.

In the general intelligence tests, there is a certain aspect of that test that measures processing speed. It was Mr. Moore's lowest score when he was tested by Dr. Evans, and it was a borderline level score. I think it came in at the 8th percentile, and his general intelligence was strong average, so that stood out as a very low score.

In my testing it was a little bit better, and that is because of practice effect. We expect that. We know in the literature it says people tested and retested on this may do better the second time. He did, but it was still his lowest score.

And then when you look at a way of measuring, okay, is this

lower score something that is unusual, or is it something that could just be a normal variant? In other words, people have individual differences. Some days they are better than other days. Well, one of the measures that measures that said that, wait a minute, no, this is very unusual. It happens very rarely in a general normative population.

So again, bing, that is a strike. You are looking at saying, okay, this is telling me that vulnerable area in the brain is weakness for him.

There were several others that stood out, and that is word recall. He did poorly for Dr. Evans. He did poorly for me.

Another area was attention. I looked at attention more thoroughly than Dr. Evans did. I gave some tests that were not administered to Mr. Moore in Evan's evaluation, and there were problems with visual attention and what we call vigilance. He was accurate on one test, but he was slow.

So that again is telling me, again, in order to be accurate he had to slow down. He wasn't as speedy as we would have expected. And he is being compared to people his own age and his own education. So this again was a stand out.

And one of the most striking things was something that is highly unusual and that is, his memory for stories. His memory for visual designs was very strong, but the unusual thing was his immediate memory was not as good as his delayed memory.

That is something we don't expect. We expect, you know,

your immediate memory, if I tell you a story and I ask you to tell it back to me immediately, I think that is going to be your best memory. If I wait, I do a delay, and in the neuropsychological world that is maybe 30 minutes, we expect
01:32 the delay to not be as good as your immediate because time should decay some of those memory traces.

But his delay was stronger. Both visually and verbally was stronger than his immediate. And I had to ask myself, why would that be? And the answer is clear. It is taking his
01:33 brain longer to consolidate information. Pathways that should have been there that would have been efficient for immediate memory weren't available, so his brain had to use other pathways to get it and consolidate it into memory, and that is why 30 minutes later it is stronger.

01:33 So, again, I am seeing consistencies in certain areas. I am seeing strange results, opposite what we would expect. And then on top of which I am seeing some emotional and some psychological issues that have a flavor in my clinical experience -- I've been doing this for 35 years -- that the
01:33 emotional response that certainly somebody whose undergone the trauma that he's undergone, I expect to have some emotional sequela.

I expect maybe some depression, maybe some anxiety, maybe post-traumatic stress disorder, but there was a flavor here
01:33 that there was a perception of something that had just a

distinct different quality to it.

And I am lucky to have lived long enough that we now have imaging studies that now can correlate, hey, what am I getting on testing and what are we seeing in brain imaging? When I looked at the brain imaging results, it made perfect sense to me. The areas of brain that were showing up to be abnormal were consistent with my findings.

They were consistent with the areas of the temporal lobe which we know, number one, has to do with areas of word recall. Okay, we have that on Evans and on mine. It has to do with emotional functioning, not just the reaction to an event, but the brain's capacity to deal with emotions. That is an injured part of Mr. Moore's brain, and that explains why the perception of this injury has a flavor for change different than just a normal reaction of depression. It is an organic injury. It is structural in the brain that has been hurt.

So on top of everything else, it exchanges the slowness of the processing. It explains why it takes the brain a little bit longer, and it will also explain why he is fatigued at the end of the day. He is putting everything that he has into being a good worker, but at the end of the day he is -- pardon the expression -- wasted. He's used up all his reserve.

He should be a healthy, you know, vibrant man in his close to 40s, and yet at the end of a workday he is wiped out and he has no energy left to do anything. On top of which he also has

very little motivation.

Well, one of the areas of his brain that has been impacted is the frontal lobes, and one of the things we know the frontal lobes orbits is are motivation, and that has been one of his
01:35 complaints, that he just doesn't feel motivated to do things.

So the combination of my test results linked with what I saw in the results of the imaging that sort of made sense and went hand in hand and it told me the picture of what has gone here and explained everything to me.

01:36 Q. And what was your ultimately diagnosis -- or diagnoses?

A. I used the new DSM-5 diagnostic criteria, and what I diagnosed was a mild cognitive disorder due to traumatic brain injury, and it was associated with other factors that I felt were also part of the brain injury, that is, major depression
01:36 which had already been diagnosed and was currently being treated; post-traumatic stress disorder that had already been diagnosed and was being treated; and anxiety disorder that was also being treated.

I didn't get into any of the physical injuries. That is
01:36 beyond my scope of expertise.

Q. And how were you able to arrive at that diagnosis with just the few tests that you mentioned being abnormal?

A. Well, I suppose that is one way of looking at it with just a couple tests that are abnormal, but that is not how -- that
01:36 is not how the diagnostic criteria work. You have to meet -- I

think in my rebuttal report I talked about the exact criteria that he met in terms of that diagnosis, that there was a decline in cognitive functioning that you could see both in neuropsychological testing as well as imaging, so he met those criteria. So that is the first hoop that you have to jump through to make the diagnosis of a mild cognitive disorder.

Then specific to the traumatic brain injury, we have the history of the injury. He had a blunt injury to his face, and we also know because of the experience of that it was also, I believe, a blast injury. And we know from our studies of the Iraqi War veterans who are coming up with blast injuries, it has opened up to the whole world of what is happening to a brain that has been exposed to forces.

So he has both I think a blunt as well as blast injury that is affected, which is why the external sheering injury that he has in the imaging why it is diffuse. It is all over the brain.

Q. And you've spoken with Dr. Lobatz?

A. Yes, I have.

Q. About Ryan's case?

A. Exactly.

Q. He has explained to you what you are explaining to us now from a neurologic standpoint?

A. We shared our data. I gave him my findings, and he shared what the imaging studies was, and they went together.

Q. So what about Ryan's history played into your diagnosis, if anything?
A. Well, up until this injury, from everything that I could tell and from the records that I've seen is that this young man
01:38 was on an upward trajectory. He had been the first in his academy for the Border Patrol. He ways doing quite well as an agent. His career goal was to become a criminal investigator, and his trajectory from everything that I could tell was headed straight in that area. This changed things.
01:38 Q. How did it change them?
A. Well, I don't know what the Border Patrol is like in terms of somebody who's had the kind of injury he's had, but in terms of just the psychological and psychiatric injuries that he has sustained, I don't know that that same trajectory is in his
01:39 future. I think he comes now with a history in which he's been injured. He's been hurt.
One of the things we know about somebody who's had this kind of brain injury is that an injured brain ages. It ages differently than a normal brain aging.
01:39 MR. COYLE: Objection, Your Honor, to the testimony the job trajectory. There has been no foundation laid that this witness knows anything about his ability to progress in the Border Patrol.
THE COURT: Sustained.
01:39 MR. COYLE: Motion to strike.

THE COURT: Yeah. The last portion of the answer to which the objection refers is stricken.

Next question.

BY MR CHAMBERS:

01:39 Q. During your history taking with Mr. Moore, did you discuss his career?

A. I asked him about his career and what his current career was and what his plans were for the future.

Q. And what did he explain to you in terms of that?

01:39 A. It had been his goal to become a criminal investigator for maybe another agency and that is what he was working towards.

Q. And from that information what did you deduce?

A. My -- again, as a neuropsychologist, I was questioning whether that was going to be possible if for no other reason

01:40 than the possibility of having to go into a job that would require a lot of new learning would be problematic for him.

Q. And Ryan is back to work now. You are aware of that?

A. Yes, I am.

Q. And he was back to work at the time of your evaluation?

01:40 A. Yes, he was.

Q. How in the world can somebody with a mild neurocognitive disorder due to traumatic brain injury be a functioning Border Patrol agent?

A. Good question. The one thing that I am aware of is that

01:40 the job that he is performing is one in which he has been

working at for many years, so it is not a new job. It is not a question of doing new learning.

The other thing that I am aware of, again, as a citizen not just a neuropsychologist is that I have to say that I have
01:40 concerns about him having a gun and having to make split-second decisions. To my understanding, the kind of job that he is required to do right now is not a field job. He is basically at a desk working on a computer, which as a citizen makes me feel a little bit more comfortable.

01:41 However, even with that, what I am understanding from what I have been told, is that even that is more arduous for him because even when he is working on a computer, if he is going from some other information and has to transfer that to the computer, if he doesn't write it down, he can't remember it.

01:41 Again, that is telling us exactly what the test results showed and the imaging is showing is that it is not staying there. The memory isn't there.

Q. And, again, just so I am clear, you noted deficiencies with Mr. Moore's processing speed in your testing?

01:41 A. Absolutely.

Q. What kind of stuff would that affect?

A. So that requires -- the way it is measured is that it is an associative task in which your learning symbols and certain relationships to other symbols and how quickly you can do it,
01:41 and we had different measures of assessing that, and in both

measures he was slow. It wasn't that he was inaccurate. He was slower than what we would expect.

And on a completely different measure where he had to look at items and make decisions as to crossing out a certain item on a long process of two pages full of numbers and I just want you to cross out sixes, he was very accurate but he was very slow. That is processing speed.

It takes him longer, and that is why, again, if you look at the imaging, it is showing, look, those efficient pathways have been destroyed, so the brain is trying to work around it, sort of -- I am from New York. We have a subway system. We have express trains, and we have local trains. You can get to the same place if you take a local train as an express train. It just takes you longer. That is what he is experiencing.

01:42 Q. And he also had deficiencies in visual attention?

A. Yeah. That is the vigilance overtime. It takes him longer to be accurate, and again, that goes back to the processing speed. They are linked.

Q. And the word recall, is that what you were talking about before about the stories?

A. Yeah, it -- no, it is a specific test that is looking at being able to remember the names of common objects. He took that test for both Dr. Evans and for me, and it was one of his lower scores. Again, that goes right back to the imaging of the temporal lobe. That is what we call semantic language. It

is housed in the temporal lobe. That is where he has some of his damage.

Q. And you reviewed Dr. Evans' report in this case?

A. More than once.

01:43 Q. Okay. Are there any specific criticisms that you would like to point out?

A. I wrote a whole rebuttal about it, but to be succinct, I thought that Dr. Evans made light of certain of the findings. He ignored some of them. For instance, he mentions processing

01:43 speed, but never goes back there.

Uses the working memory score as an example of his great memory but didn't look at the other memory scores and explain in any way why is it his delay is better than his immediate and ignored other factors that were there and just were screaming

01:43 to be explained if no other reason but not ignored, including his exclusion that he had PTSD because he doesn't have memory for the event, which is no longer required in the DSM-5.

I am sure Dr. Koransky talked about that. But also not even seeing he has major depression. He diagnosed him as

01:44 having depressive order NOS. He made the criteria for major depression. I go through it painstakingly in my rebuttal.

So not only from the cognitive end did he not highlight specific areas that were attributable to brain injury but also not understanding that the temporal lobe injury is part of the

01:44 emotional injury, not from a reactive stand but from an organic

stand.
Q. So you are saying that a lot of what you are seeing in Ryan both from a cognitive standpoint and an emotional standpoint stems from a brain injury?
01:44 A. Yes.
Q. And you have also spoken with Doreen Casuto, who is a life-care planner?
A. I have.
Q. Can I see Exhibit 66, please.
01:44 Is this the report that you've seen?
A. Yes.
Q. If we can go to the next page.
A. Yeah. I see my initials on some of this.
Q. And you have reviewed this report that I am showing you
01:45 now, Exhibit 66?
A. Yes.
Q. And you had discussions with Doreen?
A. Yes.
Q. And you read Exhibit 66?
01:45 A. Yes.
Q. And the recommendations that are contained within Exhibit 66 are yours?
A. Absolutely, yes.
Q. Based on the ones attributable to your initials.
01:45 A. The ones with my initials are the ones that I gave my

opinion of what was needed.
Q. Did you see any errors in what recommendations ultimately made their way into the life-care plan?
A. No. I thought it was a very reasonable plan, at least from the end that I had anything to do with.
Q. You've talked a little bit about this being an organic brain injury centered type of injury. I am wondering what your thoughts are -- you know, obviously this lawsuit can be stressful. I am wondering what your thoughts are in terms of Ryan's longer term prognosis once this lawsuit is over?
A. You know, taking into account that a legal case -- I have not been in the position that Mr. Moore is in, that is, being the person here whose life is being investigated in a legal sense, that certainly that comes with stress. There is no question.
And that stress makes -- exacerbates other conditions, but that is not to say that once this portion of his life is over -- and it will be over one way or the other -- that his life will go back and have a normal sense again. He will never be who he was before this event in June of 2013, not just because of the physical injuries, but again, my expertise is brain injury.
It is the brain that I see that has changed, and he will not just be who he was before, and he will not just pick up the pieces and get on to a life that had been meaningful and a

career that had been one that he had chosen, he loved his work, that he will just pick it up and go right forward and happily dance on. It will not be the same.

His brain is not the same. It will not function the same from a cognitive end and from an emotional end. He will need treatment. He will need therapy. He will need a course of at least some cognitive rehabilitation to teach him the best strategies we can for making his brain work more efficiently, and he will also be aware that as he ages, his aging will affect the way the brain functions. It will decline differently than it might have declined had he not had this injury.

So the whole aspect of who he is as a person, because who are we as people? We're our cognitions, we're our physical sense, and we're our emotional sense. All of those factors of our functioning come from here, inside here, and it affects our work life, our recreational life, our social life, our relationships with others. That is who we are.

Well, that has changed for him, and he is -- for lack of a better term, he is going to have to reinvent himself, and he will need help to do that, and that is not to say that we won't do everything we can to make it as a constructive and purposeful life.

But to just think cavalierly that he will just be fine once this is behind him is naive, and actually it is a false -- it

is a false statement.

MR CHAMBERS: Thank you, Dr. Markel. I don't have anything further.

THE COURT: Cross-examination.

01:49 THE WITNESS: Is there -- may I get some water? Sorry. Thank you.

MR. COYLE: No problem.

CROSS-EXAMINATION

BY MR. COYLE:

01:49 Q. Good afternoon. Dr. Markel, is that how you pronounce it?

A. Markel, Markel, so long as it is not Marco.

Q. Okay. Good afternoon.

A. Good afternoon.

Q. Let's talk quickly about your qualifications. You are not

01:49 board certified by the American Board of Professional Psychology, are you?

A. No. I was -- show my age, which is when I got started, that was really just coming up on the board. What qualified you as a neuropsychologist and being able to label yourself was

01:49 what we called being a member of Division 40 of the American Psychological Association. In order to become a member of that, you had to show what your training, experience, and education was.

It was a conference that was known as the USIN Conference,

01:49 and in order to qualify for becoming a member of Division 40,

which is clinical neuropsychology, you submitted all of your criteria, all your background, everything that you needed, and they decided whether or not you qualified.

Back then that was the standard. If I were 20 years younger, I would go through board certification. At this point in my career it is not necessary.

Q. You are a neuropsychologist not a psychiatrist?

A. That's correct.

Q. So you can't prescribe medication?

A. That's correct.

Q. And so you have not treated Agent Moore?

A. No, I have not.

Q. Okay. Let's talk about your opinions. Now, you have two main opinions in this case. One is about Agent Moore's cognitive function, and the other is about his emotional function; right?

A. Well, I have an opinion regarding that, but I defer also to Dr. Koransky who was brought on as the expert to deal with the emotional functioning.

Q. Okay. So let's talk about -- well, first, it is because you believe Agent Moore has those cognitive and emotional problems that you think he is going to need future neuropsychological, psychotherapeutic, and psychiatric treatment; right?

A. Correct.

Q. And if he didn't have the problems, he wouldn't need the future treatment; right?
A. I would assume so.
Q. Okay. Let's now get into Agent Moore's cognitive function. Your opinion is that the accident with the tire caused Agent Moore to suffer a decline in cognitive function?
A. In certain areas.
Q. Specifically four areas of weakness; right?
A. Correct.
Q. And those are -- I am quoting from page 29 of your report, which is Exhibit 135 -- processing speed, visual attention, word recall, and specific areas of executive functioning?
A. Correct.
Q. And before we talk about the specific cognitive tests that you gave Agent Moore, when you are assessing a patient's cognitive function, do you also consider how the patient is actually functioning in the real world?
A. Yes.
Q. Is that important to your assessment, would you say?
A. Yes.
Q. Do you consider, for example, what the patient is doing for work?
A. Correct.
Q. What is your understanding of what Agent Moore is doing for work?

A. My understanding at the present time is he is more of an analyst and he is sitting at an office with a computer.
Q. So you have no understanding that he is out on a task force, carrying a gun, executing warrants, making arrests?
01:52 A. As of my knowledge at the present time he hasn't been doing that for quite a while.
Q. If he were doing those things, would that affect your opinion at all?
A. I think I said earlier that as a citizen I might be
01:52 concerned about the carrying of a gun, and I don't know what the Border Patrol's standard is or criteria are for the safety of that, but I would defer to them in deciding whether somebody was safe.
Q. I don't mean your opinion as a citizen but your opinion as
01:52 an expert witness assessing Agent Moore's cognitive function, would that affect -- if he were performing all those tasks without complaint, would that affect your opinion at all?
A. What I would do is I would also defer to his treaters to know because they would know him better on a daily or a work
01:52 more available record to know what is appropriate, so there are two prongs to my answer to you which is, one, his treaters would be probably a better source of that information. The Border Patrol also would be a better source of that information, and I can just tell you as a neuropsychologist I
01:53 would have concerns.

Q. Do you have any opinion about whether those kinds of tasks, carrying a gun, deciding whether to fire that gun, arresting people, participating in raids, do those kinds of tasks involve the use of cognitive skills like processing speed, visual attention, memory, and executive functioning?
A. Exactly, which is why I have concerns.
Q. Would you agree also that driving a car involves the use of cognitive skills, like processing speed, visual attention, memory, and executive functioning?
A. Sometimes it depends on what the driving is involved. It can impact all of those.
Q. If it is driving that involves surveillance of another vehicle, would that involve those skills?
A. You know, there is a specialization in driving evaluations for people who have had brain injuries, and there are actually experts in that, so I would defer to those experts.
Q. Okay. Are you aware of any reports about Agent Moore's driving records since the accident?
A. Yes, I am.
Q. What is that specifically?
A. There was an incident back that he was arrested for DUI.
Q. Anything besides that?
A. There was an incident that occurred back in 2009 before the accident.
Q. I am talking since the accident.

A. Since the accident, I am not aware of any.
Q. Let's talk now about the cognitive testing. You talked about it on direct examination, and let's talk about the four areas of weakness that you say you found.
01:54 Now, when you say weakness, that is different from saying he was actually impaired in those areas; correct?
A. Well, actually, I think the processing speed showed some impairment, and I think the word recall is an area of impairment.
01:54 Q. The other two areas, there is a difference between weakness and impairment?
A. Not necessarily because if I am remembering -- again, I don't have my report in front of me -- but I remember the specific areas of executive dysfunction. There was one area
01:55 that was I think below average or right on the borderline of below average or impaired.
And I think the world recall was in the same area. The processing speed was more impaired for Dr. Evans than it was for me, but that was because of the practice effect.
01:55 Q. Well, doctor, isn't it true that out of the more than 100 tests that you gave Agent Moore, only one of his scores actually fell in the impaired range?
A. You know, Dr. Evans used that same kind of analysis to take a look at some of Mr. Moore's scores saying that --
01:55 Q. Thank you, doctor. Can you just please answer first?

A. I'm sorry. What was your question?
Q. Out of the more than 100 cognitive tests that you gave Agent Moore, only one of his scores actually fell in the impaired range?
01:55 A. And would you point out to me which one you are talking about?
Q. We'll get into that later, but does that sound incorrect to you?
A. I know there were four areas, so I am not sure that only
01:55 one fell in the impaired area, so that is all that I am questioning on.
Q. So you don't know?
A. I don't remember.
Q. Let's talk about processing speed. Now, in the tests that
01:56 you are giving Agent Moore to measure his processing speed, essentially you ask the patient to perform a task that requires him to do some sort of mental processing; right?
A. Specific process, yes.
Q. And then the patient has to respond manually; correct?
01:56 A. Correct.
Q. Like with his hands?
A. It is a visual-motor task.
Q. So yes?
A. Meaning your eyes and your hand, and you are doing it
01:56 against the clock.

Q. So your tests aren't measuring pure processing speed, pure mental processing speed but also physical responses?
A. Correct.
Q. And, in fact, Agent Moore performed well on some of the processing speed tests you gave him?
A. He did?
Q. You are disputing that he did?
A. I am asking you because I don't recall any that he did that were measuring processioning speed.
Q. Let me direct you to page 24 of your report, which is Exhibit 135. It will come up on the screen. This is the D-KEFS motor speed test, and Agent Moore scored a scaled score of 11. A scaled score of ten is in the 50th percentile?
A. That's called motor speed. That is not processing speed.
Q. That doesn't involve any processing speed?
A. It is all per motor. There was nothing that his brain had to process to perform that. He didn't have to mitigate anything inside the brain to do anything. All he had to do there was trace a line, over a dotted line.
Q. That requires no cognitive --
A. It is pure motor. It has nothing to do with an associative process that goes on between the motor and some other brain function which is what the processing speed tests measure, so it is not measuring the same thing.
Q. You also gave Agent Moore other timed tests; correct?

A. Yes.
Q. And since they were timed, they would also tell you something about his processing speed abilities, even if that wasn't their primary purpose, right?
01:58 A. They could be, yes.
Q. So, for example, you gave Mr. Moore, on page 23 of your report, WAIS-4 arithmetic test?
A. Yes.
Q. And on that test, Mr. Moore has 30 seconds to answer each
01:58 question; right?
A. Yes.
Q. And it is a purely verbal test. There is no manual component to that one; right?
A. Correct.
01:58 Q. And on that test Mr. Moore scored at the 84th percentile; correct?
A. Right.
Q. That is the high average range; right?
A. Yes. But that is not --
01:58 Q. You also gave --
A. Excuse me. But if you are trying to make the point that that is processing speed, it is not.
Q. Thank you, doctor. I am just asking you the question.
A. Okay.
01:58 Q. You also gave Agent Moore a visuospatial matrix reasoning

test on page 23 of your report.
A. It is covering it, but --
Q. I'll pull it up here.
A. There it is.
01:59 Q. And that is also a time test; correct?
A. I don't think matrix reasoning is.
Q. You are testifying it is not a timed test?
A. Locked design, which is in that same area, is timed, and visual puzzles is timed, but I don't think matrix reasoning is.
01:59 He gets as much time as he wants.
Q. Okay. Let's talk about visual attention. On page 22 of your report, you gave Agent Moore the WMS-4 visual working memory test; correct?
A. Correct.
01:59 Q. And visual working memory is a measure of visual attention; correct?
A. Partially.
Q. And Mr. Moore scored in the 79th percentile on the test?
A. Correct.
02:00 Q. That is the high average range?
A. Correct.
Q. Let's talk about word recall, the third area of weakness that you said you found in Agent Moore. On page 24 of your report, you gave Agent Moore the California verbal learning
02:00 test?

A. That's correct.
Q. In fact, that is the only word recall test you gave to Agent Moore; right?
A. That's right.
02:00 Q. And essentially with that test, you read the patient 16 words, and then you test to see how many of those words the patient can remember?
A. Correct.
Q. And then the results are reported in this right column what
02:00 are called Z scores?
A. Well, some of them are Z scores, and some are T scores, but yes.
Q. I see. With the Z scores, looks to be all but the first of those scores; right?
02:00 A. Yes.
Q. A score of zero means that the patient is right at the 50th percentile; correct?
A. That's right.
Q. And a score of one means that they are one standard
02:01 deviation above the median?
A. The mean.
Q. The mean. Okay. And a score of minus one or negative one means the patient scored one standard deviation below?
A. Correct.
02:01 Q. One standard deviation is about 15th percentile points?

A. 16th.
Q. So a score of one means the patient scored in the 65th or 66th?
A. I'm sorry. Score, if you are one standard deviation above the mean, you are 84th percentile.
Q. One standard --
A. It goes 16 points upward or down. So 50 -- I'm sorry. Go ahead. I'm sorry. I was thinking something else.
One standard deviation -- go ahead -- is up or down 15 points.
Q. So, again, if the patient scores in the 65th percentile -- or scores --
A. No.
Q. -- scores a one, that would be approximately 65th or 66th percentile?
A. Correct.
Q. Now, none of Agent Moore's scores on this California verbal learning tests were impaired, were they?
A. No.
Q. In fact, all 24 of his scores were at or above the 35th percentile?
A. Correct.
Q. Now, let's talk about the fourth area of weakness that you say --
A. This is not an area of weakness that I said he had, so if

you are trying to imply --

THE COURT: Excuse me, doctor.

THE WITNESS: Sorry.

THE COURT: Don't volunteer anything. He'll ask you a question. Answer his questions.

Go ahead. Next question.

BY MR. COYLE:

Q. Let's talk now about the fourth area of weakness you said Agent Moore showed executive functioning. You gave Agent Moore 22 tests that were dedicated to measuring executive functioning?

A. I didn't count them, but it is possible.

Q. Does that sound; right?

A. It is probably within the ballpark.

Q. All right. I am going to show you page 26 of your report, Exhibit 135 again.

A. Yes.

Q. These are the results from the executive functioning tests you gave, and the results are reported in what is known as a scaled score; correct?

A. Yes.

Q. I think we mentioned it before but a scaled score of ten is right in the middle at the 50th percentile, right?

A. Average, yes.

Q. And a score of seven or higher is considered not impaired?

A. Seven is right at the cutoff.
Q. And above --
A. So eight -- between 8 and 12 is considered average. Anything below eight is going below average.
02:03 Q. And seven is not considered impaired; correct?
A. It is considered below average.
Q. I understand that. I am asking about impaired.
A. No.
Q. And Agent Moore's scaled scores were seven or higher on 21
02:03 of the 22 executive functioning tests you gave --
A. Correct.
Q. -- correct?
You also gave Agent Moore other tests that indirectly measure executive functioning, even if that wasn't the primary
02:03 purpose; correct?
A. Well, some people would say some of the measure executive functioning indirectly. I am not sure I do.
Q. Okay. Well, you gave him, for example, the WAIS-4 test on page 23 of your report?
02:03 A. That's the similarities test. It is verbal abstract reasoning.
Q. Does that test measure executive functioning?
A. Not from my standpoint. That is measuring the kind of abstract thinking.
02:04 Q. I understand.

A. Some people do. Some neuropsychologists do. I don't particularly find it a good example of executive functioning.
Q. And on that test Agent Moore scored at the 50th percentile?
A. Correct.
02:04 Q. And you also gave him the WAIS-4 matrix reasoning test on page 23 of your report?
A. Yes.
Q. And that test measures executive function?
A. Again, some people use that as a measure of executive
02:04 functioning. I particularly don't find it a test that I would use for executive functioning. That is why I use other tests.
Q. Agent Moore scored in the 91st percentile on that test?
A. He did.
Q. Now, let's talk about Mr. -- Agent Moore's reports to you
02:04 of memory issues. Totally apart from the cognitive tests that you gave him, he told you that he's had some memory problems since the accident; correct?
A. Yes.
Q. And those are self-reported. He told you that. There is
02:05 no other way besides the cognitive tests for you to check that; right?
A. That's right.
Q. Now, your cognitive testing didn't show any systemic memory deficits, did it?
02:05 A. What do you mean by systemic?

Q. In multiple areas, across multiple tests?
A. No. I think the thing that I pointed out that his delay was better than his immediate.
Q. When you say his delay is better than immediate, you are talking relatively; correct?
A. Yes.
Q. So he performs -- compared to other people who have taken the tests, he does better on the delayed than the immediate; correct?
A. That's right.
Q. You are not saying absolutely he is remembering things that he didn't remember before?
A. He is remembering more things than he was able to tell immediately.
Q. Relative to other people who took the test?
A. Relative to himself. In other words, if he had a scaled score of 15 immediate and a scaled of 19 after, that is relative to himself.
Q. Those are scaled scores compared to everyone else who took the test?
A. I am comparing him to the normative population, so in other words, the immediate scores compared to other people his age and his -- I think this one is only age, so he's compared to other people his age.
Then also the delayed is also relative to other people his

age, so everything is the same, to age.
Q. Now, let's talk about the specific memory test that you gave. On page 22 of your report you gave the WAIS-4 working memory test?
02:06 A. Yeah.
Q. And he scored in the high average range on that test, the 77th percentile?
A. Correct.
Q. You also gave him on page 22 of your report, the WMS-4
02:06 visual working memory test?
A. Yes.
Q. And also he scored in the high average range on that test?
A. Correct.
Q. You gave him, on page 25 of your report, the WMS-4 auditory
02:07 memory index?
A. It is two tests. It is the auditory memory. It is logical memory 1 and 2, and these were tests that he had been given a month previously, but he had the same pattern, which was stronger scores on the delay than on the immediate.
02:07 Q. And in both of these he was in the very superior range; correct?
A. Exactly.
Q. In fact, he scored in the 99th percentile on one of them right?
02:07 A. Yes.

Q. That is the highest possible score you can get?
A. About, yes.
Q. You can't score in the 100th percentile; correct?
A. Correct.
02:07 Q. All right. Let's talk about what you think was the cause of these areas of weakness. Now, you would admit that depression, anxiety, and stress can affect a person's cognitive functioning; correct?
A. Yes.
02:07 Q. Yet you ruled out those alternative causes in this case because of the pattern that you say you observed in Mr. Moore's cognitive results; correct?
A. Yes.
Q. Specifically you think that Agent Moore's pattern of
02:08 results is more consistent with a mild traumatic brain injury than with emotional problems?
A. Yes.
Q. Okay. Now, we talked about your opinions about Mr. Moore's cognitive function. Now, are you deferring to Dr. Koransky on
02:08 Mr. Moore's emotional functioning?
A. No. I have it in as my diagnoses as well.
Q. Okay. So now you think he's got post-traumatic stress disorder; correct?
A. I do.
02:08 Q. And the basis for that opinion is his test results on the

Trauma Symptom Inventory 2; correct?
A. Among them, yes.
Q. And that test relies entirely on the patient's self-reports; right?
02:08 A. Correct. It also has validity measures in it.
Q. It uses suggestive questions; right?
A. It has statements, not questions, in which the patient endorses yes or no or a scale.
Q. Yes. So it asks, for example, how often in the past six
02:09 months you've experienced nervousness?
A. I don't know if that is one of the items, but something like that.
Q. Or how often in the past six months have you experienced sadness?
02:09 A. Correct.
Q. What were Agent Moore's validity scale scores on that test?
A. He -- I'll have to look at my report, but he was -- they were valid scores.
Q. Your report doesn't list the actual scores. What were
02:09 they?
A. If you want, I have my briefcase outside. I'll get it.
Q. Do you know what his atypical response score was?
A. I know that it was a valid measure, so if you want, I'll go out there and get the exact score.
02:09 Q. Was there any evidence in his psychological testing that

suggested he was exaggerating his symptoms?
A. In the MMPI-2RF -- and again, I'll go my report to do it -- from memory, there was a question as to whether or not there were certain responses that could have been exaggeration, but
02:10 it also said if there is a history of medical issues and medical problems that could explain his responses, then they are not forms of exaggeration.
It was clear that Mr. Moore's medical records made it clear that he had substantial medical issues and that he was
02:10 endorsing every item correctly based on what his experience and what his history is, so I considered it a valid profile.
Q. So you are saying the MMPI-2 was the only indication of exaggeration in his test results?
A. In my testing, yes.
02:10 Q. Did you look at any other testing?
A. Well, actually what I did is I took -- I did not give him the MMPI-2RF. It was given by Dr. Koransky who provided me the raw data, and I rescored it using the Pearson Protocol Computerized Program, so in my report I quote exactly what the
02:11 computerized program said.
Q. Did you also look at Dr. Koransky's raw test data for the other tests that he administered?
A. I did not.
MR. COYLE: I have nothing further.
02:11 THE COURT: Redirect.

REDIRECT EXAMINATION

BY MR CHAMBERS:

Q. There is one thing that I don't understand, Dr. Markel. How can Ryan have the neurocognitive disorder that you found in your testing if we see so many of his scores average or even above average?

A. Thank you for asking. So that is one of the challenges in looking at his -- the entire gamut of all the tests and all the scores that were administered by me, let alone in combination with Dr. Evans, and the way I reasoned it out and the way I explained it is that, again, this is a complex organ, and so, yes, you know, his working memory both visually and auditorily for example is excellent. It is truly excellent, as-is his remembrance of stories.

But there were certain indications along the way that stand out as, wait a minute, this is not normal, why is delayed better than immediate? Why is it that he has so much sparing? And that is what you were talking about. How is it that he has all these excellent scores and yet you are talking about four areas that are not right?

One of the magnificent things about the brain is that it is a complex organ, and one of the major things of the findings for Mr. Moore is the fact that he is still functioning extremely well. I think Dr. Lobatz said it perfectly well in what I read of his deposition, which was if any of us had the

kinds of damage that we see in his imaging study, we wouldn't function as well.

So how is he doing it? And that I think is one of the miracles of the sparing that took place. Even with all the -- the micro-hemorrhaging that we see that is diffuse in the brain, his brain is still able to do things, and the one thing his brain is still able to do is the work around, which is why it is taking him longer. That is the key issue here.

You know, to tell me that his ability on the addition test is in the above average range, fine, isn't that wonderful, but that is not processing speed. That is a specific function of a particular part of the brain that has to listen to a word problem I read to him and solve it mentally without the use of paper and pencil, and that part of his brain is still functioning.

Now, it might have even been better had this injury not happened, but he is a really strong, bright, cognitively, you know, strong person, so his brain is resilient. That doesn't mean he hasn't been damaged, and that doesn't mean that the areas that we're finding consistently in Dr. Evans' and my testing are nefarious or that they are not real. They are real. They are very real.

And they will impact and are impacting his daily functioning, and so just blow that off because he has some great scores -- you know, before we had imaging that was our

child in mild traumatic brain injuries. How do we convince this is a brain injury, this isn't something exaggerating or somebody having emotional problems.

The brilliance of what has happened with our technology is we now have imaging to say, you know what, there are some people that do not get over a mild traumatic brain injury. Many people do, three to six months they are back to normal. There is a certain sampling of people that do not. Mr. Moore is one of those people.

02:14 Q. Just one other question, a lot has been made with you and others about these MMPI and other various testing mechanisms that are sent off to scoring to other companies, and then in turn, as I understand it, you receive a score back. Is that a summary of --

02:14 A. Correct.

Q. These people that you send the scores off to have to idea who the patient is; is that right?

A. The system we use is a computerized scoring program. You input what the responses are to the items, and they -- the

02:15 computer analyzes it and spits back a report to you. The computer only knows the person's gender, their age, their level of education and whether or not they are married.

It knows nothing about their medical history. That is where you as the neuropsychologist or psychologists have to do

02:15 the interpretation and say what makes sense here, and one of

the things that came back and in Mr. Moore's interpretation was the possibility that this pattern could be exaggerating, but it also specifically points out if the person's medical history is such that these responses could be explained by a true medical condition, then this is not exaggeration. This is a valid response. That is the case with Mr. Moore.

MR CHAMBERS: Thank you, doctor.

THE COURT: Anything else?

MR. COYLE: Your Honor, since the doctor offered to get her validity scale scores on the one test, the Trauma Symptom Inventory 2, would you mind if we asked her to step outside and grab those and read them?

THE COURT: Please do that, doctor.

THE WITNESS: Got it.

MR. COYLE: May I, Your Honor?

THE COURT: You may.

RECROSS-EXAMINATION

BY MR. COYLE:

Q. What were Agent Moore's atypical response scores on the Trauma Symptom Inventory 2.

A. He has a raw score of eight.

Q. A raw score of eight?

A. A raw score of eight, and the cutoff for being invalid is 15.

Q. And what is Agent Moore's response level score on the same

test?

A. Two.

MR. COYLE: Thank you, doctor.

Nothing further.

02:17 THE COURT: Anything else?

MR CHAMBERS: No, Your Honor.

THE COURT: May this witness be excused?

MR CHAMBERS: Yes.

THE COURT: All right. Thank you.

02:17 You may stand down. You are excused as a witness.

(Proceedings concluded at 2:17 p.m.)

---000---

C-E-R-T-I-F-I-C-A-T-I-O-N

I hereby certify that I am a duly appointed, qualified and acting official Court Reporter for the United States District Court; that the foregoing is a true and correct transcript of the proceedings had in the aforementioned cause; that said transcript is a true and correct transcription of my stenographic notes; and that the format used herein complies with the rules and requirements of the United States Judicial Conference.

DATED: March 1, 2017, at San Diego, California.

/s/ Melinda S. Setterman

Melinda S. Setterman,
Registered Professional Reporter
Certified Realtime Reporter